Unplugged Activity

Title: ANTI - JUNKY TEAM IN ACTION!

Educational level: 3rd grade, 2nd cycle of Primary Education.
Curricular areas: Social Science
Timing: 1 session of 45 minutes (2nd term).

Summary

On a daily basis, human beings generate a lot of garbage... more than we think! But what is really important is the following question: What do we do with the garbage we generate? You only need to take a quick look at the ground to know that there are a lot of people who throw all the garbage around. This activity aims to make students aware of the enormous importance of collecting waste (both their own and others') in order to take care of the environment in which they live.

Working in teams of 4 or 5 members, they will have to create itineraries to collect the waste located on a board. The groups will have a card to complete with different questions, sometimes creating short and simple routes and sometimes more complex ones.

Aims

- Apply logic to make predictions.
- Develop spatial orientation to create sequences and algorithms to complete specific tasks.
- Stimulate interest and motivation towards learning basic concepts of unplugged robotics.

Key competencies to develop: competence in linguistic communication, mathematical competence and in science, technology and engineering, digital competence, citizenship competence.

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How do we do it?

1. **Building interest (5 - 10 minutes):**

We establish a starting point in the session by displaying on the digital screen several images of different environments (city, countryside, beach...) with different waste. Ask students what they see. We'll create a debate with questions (some examples are shown below):

- What kind of waste is generated doing shopping? When you go on vacation to the beach or to the countryside, what kind of waste is generated? Could you give some more examples of everyday situations where we produce a lot of garbage?
- What could we do to avoid generating so much waste?
- Have you ever seen garbage lying around and you didn't pick it up because it wasn't yours?

2. **Explaining the activity and the materials (5 minutes):**

Explain to the students that each group will be an "Anti-Junky Team", in charge of completing certain tasks for their boss "Zero-Wasty", who is very concerned about the increasing pollution in the world.

The first board will be projected on the digital screen, taking time to name each waste item located in the boxes. In addition, it should be pointed out that each element has a specific score associated with it (show the corresponding material).

Finally, let students know that the objective of the activity will be to create the routes that their boss has asked them to follow in the activity sheet. At the same time, they collect the waste that is scattered around the board adding up the scores associated with each one. They finish when reaching the final point, the garbage can.

Before starting, the first question in the worksheet will be exemplified, making it together as a large group to ensure its understanding. Once all the students have understood the dynamics of the activity, the worksheet can be distributed and the time for completion will be indicated.

3. **Working on the main activity (20 - 25 minutes):**

This time will be dedicated to the creation of paths and sequences as well as to the addition of scores. Each team will have to write their answers on the worksheet paper by hand.

4. **Sharing and reflecting (5 minutes):**

The final moment of the session will be dedicated to share the answers: both the final scores obtained as well as some of the routes. It is important to emphasize the importance of good global actions for the benefit of all and the care of the environment.

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Suggestions

The level of difficulty could be adapted for students. For this purpose, two boards and a set of additional questions are included in the materials.

If needed and desired**, the concept of multiplication** could be worked on by explaining the repetition of commands. In the answer, instead of a repeated set of arrows pointing in the same direction, it could be expressed as a single command multiplied by ‘x’ number.

Resources

- **Human:** teacher.
- **Material:** digital screen, worksheets and printable materials, pencils, and erasers.

Space: classroom.

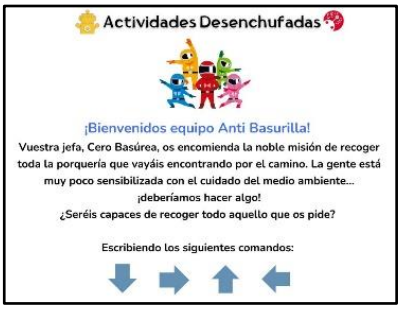
Type of activity: in groups of four – five members each.

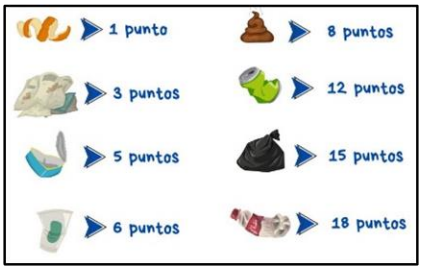
Printables’ links:

Boards

Points

Activities





Picture’s links (Building interest section):

City

Countryside

Beach

All links are from Freepik.es and they are for free use.

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What have we learned?

The rubric to assess the activity is attached below:

Assessment Criteria	4 Excellent	3 Very good	2 Satisfactory	1 Needs improvement
Student reflects on the need and importance of caring for the environment.	Understands the need to care for the environment, explaining the benefits on an individual and global level.	Partially understands the need to care for the environment, taking into account the benefits on an individual and global level.	Partially understands the need to care for the environment, explaining only the benefits at the individual level.	Does not demonstrate understanding of the importance and need to care for the environment.
Student knows and uses commands to orientate spatially and create sequences aimed at a specific objective.	Knows all commands and orients himself especially easily and fluently. Achieves the target.	Knows all commands, but is sometimes particularly disoriented. Achieves the target.	Knows some of the commands and is especially difficult to orientate himself/herself.	Does not know how to use the commands or is unable to orientate spatially.
Student communicates respectfully and cooperates with other students in group work.	Communicates effectively with others and cooperates without difficulty.	Communicates effectively with others, but sometimes finds it difficult to cooperate.	Sometimes fails in communicating with others and often does not like to cooperate.	Does not communicate needs or opinions. Does not collaborate in group work.

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Computational Thinking

Logic (prediction and analysis): thinking to make predictions, solve problems and make decisions based on available information.

Algorithms (steps and rules): is a step-by-step process that solves a problem or completes a task.

Patterns (recognize and use similarities): recognizing similarities or patterns in problems or data, which means come up with solutions quickly and effectively.

More information

QR codes to the activity resources:

Boards

Points

Worksheet

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